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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,662	07/13/2001	Yasuhito Inagaki	09792909-5081	5976

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EXAMINER

KORNAKOV, MICHAIL

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/905,662

Applicant(s)

INAGAKI ET AL.

Examiner

Michael Kornakov

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1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 1-5, 9-11 and 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-8, 12 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-17 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/05/2004 has been entered.
2. Claims 1-17 are pending in the application. Claims 1-5, 9-11 and 14-17 are withdrawn from consideration as being drawn to a non-elected invention. Claims 6-8, 12 and 13 are examined on the merits.
3. The double-patenting rejection of Claim 6 over claims 29 and 33 of copending Application No. 09/985,396 is withdrawn in view of cancellation of claims 29 and 33.
4. The text of those sections of Title. 35, U.S. Code not included in this action can be found in a prior office action.
5. Claims 6 and 7 stand rejected under 35 U.S.C. 102(e) as being anticipated by Verhaverbeke et al (U.S. 6,261,845).

Verhaverbeke teaches apparatus **for wet processing a substrate**, comprising a processing **vessel with treatment solution (reads on substrate cleaning bath of the instant claim 6)**, which can be utilized for cleaning or etching purposes, and wherein the treatment solution can be provided in static regime for soaking the substrate (col. 1, lines 8-13; col.5, lines 26-27; col.8, lines 15-20; col. 10, lines 17-29; col. 13, lines 11-

14). The treatment solution of Varhaverbeke comprises ammonium fluoride or ammonium fluoride buffered hydrofluoric acid (col.10, lines 27, 28, col.11, lines 25-29). The apparatus of Verhaverbeke also comprises multiple containers for separate storing and delivery of **different** processing fluids, among them ammonium hydroxide, to the processing vessel through liquid supply system, equipped with multiple valves (reads on a fluid source and fluid feeding means of the instant claim 6) (col.14, lines 3-19); measuring means for measuring flow rates in the cleaning liquid processing stream (reads on "characteristics of the cleaning liquid", as instantly recited) (col.6, lines 53-55); processing system for receiving the measured flow rates, manual or computerized calculating the concentration of chemicals (reads on "arithmetically processing a signal", as instantly claimed) (col.6, lines 45-52) and providing a subsequent processing stream in response to the calculated concentration of chemicals in the wet processing stream (col.18, lines 31-37). Therefore, all the structural limitations of apparatus as per the instant claims 6 and 7 are met by Verhaverbeke.

It is also noted that the instantly recited fluids, such as ammonia and aqueous ammonia are NOT interpreted as structural limitations of apparatus, because as stated in MPEP 2115 "expressions relating an apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim", consult *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969).

In the instant case the identity of structural elements of the claimed apparatus and that of Verhaverbeke defines the inherency of its ability to sustain the liquids as instantly claimed.

9. Claims 6-8, 12 and 13 stand rejected under 35 U.S.C. 102(e) as being anticipated by JP8-334461.

JP'461 describes wet treatment apparatus, which comprises substrate treatment bath 1 with treatment liquid, sources of fluid (13 and 14) with feed zone (reads on "fluid feeding means for feeding the fluid from said fluid source to said bath", as instantly recited) for adjusting and controlling the concentration of treatment liquid (EQ); means for measuring refraction index of treatment liquid (4) and an electronic computing system (7,12), which controls feeding the fluid from fluid source to substrate treatment bath (see Abstract; Fig.1 and 2; paragraphs 0005-0007, 0011, 0013-0016).

Therefore, **all the structural limitations** of apparatus as instantly claimed are met by JP'461. Regarding the specific ammonium derivatives, recited in the instant claim 6, the fluid sources of JP'461, while being capable of holding such liquids as fluoric acid and ammonium fluoride, are fully capable of holding solution of aqueous ammonia. It is noted here that "expressions relating an apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim", consult *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969).

Response to Arguments

11. Applicant's arguments filed March 03, 2004 have been fully considered but they are not persuasive.

Applicants argue that neither the reference to Verhaverbeke nor the reference to JP8-334461 disclose a liquid source comprising at least one fluid selected from a group consisting of ammonia and aqueous ammonia. In reply, Applicants' attention is drawn to the fact that the reference to Verhaverbeke names the source of ammonium hydroxide solution among the variety of other sources of processing fluids and the reference to JP'461 recites a fluid source, which is fully capable of holding solution of aqueous ammonia. Furthermore, "inclusion of material worked upon by a structure being claimed does not impart patentability to the claims", consult *In re Young*, 75 F.2d 966, 25 USPQ 69 (CCPA 1935).

Applicants also argue that the enclosed Declaration under 37 G.F.R. 1 1.132 provides the evidence of unexpected difference between using aqueous ammonia or ammonia as replenishing fluids compare to the prior art replenishing fluids. Applicants' attention is drawn to the fact that the indicated Declaration is concerned with alleged unexpected results of the method, however the method claims have been withdrawn from consideration as a non-elected invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. Kornakov

Michael Kornakov
Primary Examiner
Art Unit 1746

07/15/2004